9.4.2 TANKS

This is the section of the technical review where the permit writer reviews the permit application for the adequacy of the tank design. Sufficient tank design information must be provided in the permit application to allow DTSC to determine if the tanks meet design and performance standards and are adequate to minimize the risk to public health and safety and the environment.

KEY QUESTIONS

What facility details require seismic analysis and what was the specific analysis of each?

What are the most likely failure modes and what features ensure that the failure will not occur? Consider: structural failure; failure of joint, connections, fittings, and seals; uncontrolled reactions; and corrosion. What additional features of the project ensure its safe operation?

Was the tank designed and constructed in accordance with API 650 or equivalent?

Is every tank system designed and managed in a way that leakage can be detected within 24 hours after starting to leak?

Can all leakage or spillage be immediately contained and removed?

What operating features such as flame arrestor, pressure relief valves, etc., are included in the facility design and what inspection procedures were used to ensure that they function as designed?

What steps were (or are going to be) taken to prevent damage to the tank during installation (particularly areas of the tank which cannot be inspected visually after installation)?

Was (or is) an independent qualified professional used to observe and report on the quality of the installation of all tanks, especially underground tanks? Should the permit contain a condition requiring the submittal of such reports prior to the operation of any tanks?

For any facility design that includes moving hazardous waste in pipes, or any sort of hazardous waste treatment: Where does the waste start, how is it moved, and where does it end up? What happens to the waste as it moves from its starting point to its ending point? How are the waste and waste reactions controlled along the route and during mixing, heating, reacting, or treatment? How is the waste monitored during movement, heating, reacting, or treatment?

What were the results of any leak detection testing? Was it performed in the presence of a DTSC permit writer? Did the leak detection method use meet the leak detection performance criteria for underground storage tanks?

If any closed top tank has access ports or doors, is there adequate confined space training for maintenance and site personnel?

Where in the Part B is the above information explained, such that it is easily found and comprehended by future enforcement personnel?

Is every tank and ancillary equipment specifically included in the inspection plan, closure plan, and annual testing plan?

What specific engineering or other certifications were submitted? Was sufficient supporting documentation submitted with each to fully justify the certification statements made?

Do the engineer's supporting calculations correctly reflect the specific gravity of the wastes being handled? If API or other design standards are used verbatim, is the density of the wastes handled differently from the densities used by API as design criteria?

Does the engineer's certification contain disclaimers that negate the usefulness and intent of the certifications?

Have there been tank releases at the facility in the past? What were the causes? Did they affect the community?

REQUIRED OUTPUTS

APPLICABLE REGULATIONS AND STATUTES

State Laws and Regulations:

Title 22, Cal. Code of Regs., Div. 4.5

CHAPTER 20:	THE HAZARDOUS WASTE PERMIT PROGRAM
Article 2:	Permit Application
66270.14	Contents of Part B: General Requirements
66270.16	Specific Part B Information Requirements for Tank Systems
CHAPTER 10:	HAZARDOUS WASTE MANAGEMENT SYSTEM: GENERAL
Article 2:	Definitions
CHAPTER 14:	STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TRANSFER, TREATMENT, STORAGE, AND DISPOSAL FACILITIES
Article 2:	General Facility Standards
66264.15	Requirements
66264.16	Personnel Training
66264.17	General Requirements for ignitable, Reactive, or incompatible Wastes
66264.25	Seismic and Precipitation Design Standards
Article 3:	Preparedness and Prevention
66264.31	Design and Operation of Facility
66264.33	Testing and Maintenance of Equipment
Article 4:	Contingency Plan and Emergency Procedures
66264.56	Emergency Procedures
Article 5:	Manifest System, Record Keeping, and Reporting
66264.77	Additional Reports
Article 7:	Closure and Post Closure
66264.111	Closure Performance Standard
66264.114	Disposal or Decontamination of Equipment, Structures and Soils
Article 10:	Tank Systems
66264.192	Design and Installation of New Tank Systems or Components
66264.193	Containment and Detection of Releases
66264.194	General Operating Requirements
66264.195	Inspections
66264.196	Response to Leaks or Spills and Disposition of Leaking or Unfit-for-Use

	Tank Systems
66264.197	Closure and Post-Closure Care
66264.198	Special Requirements for Ignitable or Reactive Wastes
66264.199	Special Requirements for Incompatible Wastes

Federal Laws and Regulations:

Other Laws and Regulations:

POLICIES

DTSC Policies:

If the facility has pipes or other equipment that cannot be visually inspected on a routine basis, it must be leak-tested in the permit writer's presence during the Phase I Technical Review process, and the permit must contain a condition requiring at least annual leak testing. The applicant must use a leak testing method that meets the leak detection performance criteria for underground tank testing.

EPA Policies:

Other Policies:

INSTRUCTIONS TO APPLICANTS

Handouts to be Given to Applicants:

Examples to be Given to Applicants:

CEQA CONSIDERATIONS

PUBLIC PARTICIPATION CONSIDERATIONS

If the facility has had a history of past tank releases, even one major release -- there could be public concern which will have to be acknowledged and addressed through the public participation effort.

LEGAL CONSIDERATIONS

INTERAGENCY AGREEMENTS & MOU's

COORDINATION WITH OTHERS

Other DTSC Units:

Environmental/Legislative/Industry Groups:

Other Agencies:

Special Requests:

STEP-BY-STEP PROCEDURES

Flow Charts:

Checklists:

TECHNICAL REFERENCES

Technical Resource Document for the Storage and Treatment of Hazardous Waste in Tank Systems, December 1986, EPA/530-SW-86-044, OSWER Policy Directive No. 9483.00-1

Volumetric Tank Testing: An Overview, April 1989, EPA/625/9-89/009

EXAMPLES OF COMPLETED WORK PRODUCTS

TIMELINE AND PLANNING

Permit Processing Chart:

Workload Standards:

Statutory & Other Deadlines:

WP File Name: 2/CH0942_P.MAN

WP File Name of Checklist: 5/CH0942_P.MAN

List of Examples:

List of Appendices:

List of References: